

ABSTRACT

A pixel signal having a k-th spectral characteristic at a pixel interpolation position occupied by a pixel signal having an h-th spectral characteristic is generated from a set of pixel signals arrayed in a two-dimensional plane, each having one of a plurality of spectral characteristics, by calculating a difference between low-frequency components, corresponding to a degree of correlation between pixel signals having the k-th and h-th spectral characteristics in a neighborhood of the pixel interpolation position (8r, 8g, 8b, 24k, 24h, 26), calculating a non-correlation value corresponding to a degree of non-correlation between the pixel signals having the k-th and h-th spectral characteristics in the neighborhood of the pixel interpolation position (7r, 7g, 7b, 23k, 23h, 25), and obtaining the pixel signal having the k-th spectral characteristic at the pixel interpolation position by using the calculated difference and the non-correlation value (27, 28, 29). Accurate interpolation can be performed despite various different correlation relationships between color component values.